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**Use of hedonic models to value urban disamenities: A case study of Meethotamulla
dumpsite, Sri Lanka**

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Municipal Solid Waste (MSW) has become a major problem worldwide. The challenge of environmentally sound disposal of such waste has become critical in many developing nations, where open dumping is the most common method of disposal of such waste. This has resulted in creating mountains of solid waste dumps in urban centers posing many externalities, even fatal, to surrounding communities. The discussion on such externalities however is on the rise, but the important factors such as the impact on landscape disamenities caused by dumpsites on the quality of life is often undermined. This study is based on the *Meethotamulla* dump site, an open dump site located in the *Kolonnawa* Municipality in Western Province of Sri Lanka. Until the collapse of the site, 850 metric tons of MSW had been dumped daily and around 1000 households have been directly affected around the dumpsite. The main objective of the study is to calculate the marginal value of disamenities caused by an open dumpsite using a hedonic model.

A household survey was conducted using a pre-tested questionnaire among the surrounding community of the dump site; a total of 117 households were surveyed using stratified random sampling along three directions from the dump from May to August 2016. The structural, neighborhood, and environmental attributes and transaction data were collected directly from households to estimate the disamenity effects of the dumpsite. Three basic forms (linear, semi log and log) were tested using MINITAB 14.1 software by running multiple linear regression analysis, with ordinary least squares (OLS) method being used to estimate model parameters.

The results from the selected model (log-linear) showed that the value of the property will be decreased by a factor of 0.185 if the dumpsite is visible. Accordingly, total loss of aesthetic value was estimated as Rs. 1,265.8 million whereas the annual loss of aesthetic value was Rs. 37.56 million. The loss of aesthetic value per ton of MSW was calculated as Rs. 121, which is less than a US\$ 1. Given the typical estimates from other studies ranging from US\$ 2.4 -37 per ton of waste, this may be an underestimation of the actual loss of amenity perceived by the surrounding community.

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